

SHEET 1 OF 1








GEOLOGY GENERALIZED FROM HOARE AND COONRAD (1978)

SURFICIAL DEPOSITS

VOLCANIC, SEDIMENTARY,
AND METAMORPHIC ROCKS

INTRUSIVE ROCKS

Qib	)	Pleistocene	)	QUATERNARY
QTe	)	Plio-Pleistocene	)	QUATERNARY or TERTIARY
Tv	)	Early Tertiary	)	TERTIARY
Ks	)	Late Cretaceous	}	CRETACEOUS
Kt	)	Upper and Lower Cretaceous		
Kb Klg Kls Kog	)	Lower Cretaceous		

	} Lower Cretaceous to Middle Jurassic	}	CRETACEOUS AND JURASSIC
			
	} Middle to Lower Upper Jurassic	}	JURASSIC
	} Lower Jurassic		
	} Lower Cretaceous	}	MESOZOIC AND PALEOZOIC
	to		
	} Lower Ordovician ?		
	}	}	PALEOZOIC
			
			PRI-CAMBRIA

DESCRIPTION OF MAP UNITS



SURFICIAL DEPOSITS

UNCONSOLIDATED SEDIMENTARY DEPOSITS

SEDIMENTARY, VOLCANIC, AND METAMORPHIC ROCKS

[illegible]

GEOLOGIC SYMBOLS

 Contact. Known, approximately located, gradational, and inferred. Most contacts between bedded rock units are probably faults.
 Fault or fault zone. Dashed where approximately located, inferred, or concealed.
 Thrust fault. Dashed where approximately located, inferred, or concealed. Sawtooth on upper plate.
 Hornfels

GEOCHEMICAL SYMBOLS

RED MOUNTAIN ULTRAMAFIC BODY
RED MOUNTAIN CONTACT ZONE

GEOCHEMICAL SAMPLE SITES

- 1 ROCK (CLARK, GRYBECK, GREENWOOD, AND OTHERS, 1978; CONWAY, AND OTHERS, 1979)
- * CONCENTRATE (OVERSTREET, AND OTHERS, 1973)
- ⊗ OFFSHORE AND ONSHORE SEDIMENTS (BARNES, AND OTHERS, 1978)
- BEACH AND STREAM SEDIMENTS (BERRYHILL, 1963)
- STREAM DRAINAGE SEDIMENT (HESSIN, AND OTHERS, 1978)
- STREAM DRAINAGE SEDIMENT (CLARK, GRYBECK, HESSIN, AND OTHERS, 1978)
- STREAM DRAINAGE SEDIMENT (EAKINS, 1968, 1969)

ABUNDANCE

- 100 NUMBER WITH SOLID ROCK SAMPLE-SITE SYMBOL REPRESENTS GEOCHEMICAL CONCENTRATION IN PARTS PER MILLION (PPM)
- SOLID STREAM-DRAINAGE SAMPLE-SITE SYMBOL INDICATES GEOCHEMICAL ABUNDANCE OF 90TH PERCENTILE VALUE OR GREATER IN TWO OR MORE GEOCHEMICAL DETERMINATIONS AS SHOWN IN HISTOGRAMS (SHEET 1)
- ABUNDANCE SYMBOLS REPRESENTING 95TH PERCENTILE OR GREATER CONCENTRATIONS DETERMINED IN STREAM-DRAINAGE SITE SAMPLES ARE SHOWN WITH HISTOGRAMS (SHEET 1)

DISCUSSION OF GEOCHEMISTRY

THE TWO SHEETS COMPRISING THIS REPORT SHOW THE DISTRIBUTION AND ABUNDANCE OF COBALT AS GEOCHEMICALLY DETERMINED IN VARIOUS SAMPLE MEDIA COLLECTED FROM LOCATIONS THROUGHOUT THE GOODNEWS AND HALEMEISTER ISLAND QUADRANGLES REGION. SHEET 1 COVERS THE ENTIRE REGION AND SHEET 2 COVERS THE AREA OF ABUNDANT SAMPLE DATA IN THE VICINITY OF PLATINUM. SAMPLE LOCATION AND CONCENTRATION SYMBOLS ARE SHOWN ON BOTH SHEETS. DATA PRESENTED HAVE BEEN COMPILED FROM ANALYSES AND LOCATION DATA BY HESSIN AND OTHERS (1978); CLARK, GRYBCEK, GREENWOOD, AND OTHERS (1978); CLARK, GRYBCEK, HESSIN, AND OTHERS (1978); CONRAD AND OTHERS (1978); HESSIN AND OTHERS (1978); AND OVERSTREET AND OTHERS (1973).

THE HISTOGRAMS ON SHEET 1 HAVE BEEN USED TO IDENTIFY CONCENTRATIONS OF COBALT THAT MIGHT BE ANOMALOUS. ALTHOUGH THE HISTOGRAMS ARE BASED SOLELY ON THE ANALYSES REPORTED BY HESSIN AND OTHERS, THE RESPECTIVE CONCENTRATIONS (RANGING FROM 500 AND 900 PPM) APPEAR TO PROVIDE REPRESENTATIVE CONCENTRATION RANGES FOR THE SAMPLES. SOME OF THE HIGHER VALUES OF CONCENTRATION OF COBALT SHOWN ON THE HISTOGRAMS MAY BE DUE TO LOCALIZED SOURCE AREAS. THE SOURCE OF COBALT OUT WITHIN THE IMMEDIATE SOURCE AREA, WHICH IS SPECIFIC KNOWLEDGE KNOWN TO CROP PRODUCERS, IS NOT KNOWN. THE HIGHER VALUES OF COBALT CONCENTRATION ARE NECESSARILY ANOMALOUS. (SEE HISTOGRAM OF ROCK ANALYSES DATA FROM THE COASTAL PLAIN OF THE MOUNTAIN SLOPE ON SHEET 1). THE COBALT CONCENTRATIONS ON THE GEOLOGIC MAP DATA INCLUDED IN SHEET 1 AND THE MORE DETAILED GEOLOGIC MAP OF THE REGION (HOARE AND CONRAD, 1978), SHOULD BE UTILIZED IN CONSIDERING THE COBALT CONCENTRATIONS OF THE COBALT THAT HAVE BEEN DETECTED IN VARIOUS GEOCHEMICAL SAMPLES.

BY

T. D. HESSIN, P. M. TAUFEN, J. C. SEWARD, S. J. QUINTANA, A. L. CLARK, DONALD GRYBECK, J. M. HOARE, AND W. L. COONRAD